ARJUNA

JEE

LECTURE NO. 1

Mole Concept

Sarvesh Sir

Teaching Experience

- 17 years of teaching experience
- Worked at H.O.D of Chemistry
- Ex. : Senior Faculty of Chemistry

  Bansal Classes (Kota)

  Career Point (Kota)

  Narayana Delhi
- Mentored JEE Advance Holding
  Ranks : 3, 7, 19, 27 .....

Sarvesh Sir

Our Study Plan

- Attend all the Lectures ✓
- Solve all the DPP's ✓
- Be regular & avoid Backlogs. ✓ ***
- Do not skip Tests ✓
- Clear your Doubts ✓
- Do Periodic Revision of CSD & Self Study
- Find Time for your Hobbies

Concept By SARVESH DIXIT

Roadmap to IIT-JEE 2024

Our Target :

- To crack IIT-JEE 2024 & secure seat in IIT- College

Our strategy :

- Study whole heartedly
- Remain dedicated & focused
- Stay away from all distractions
- Follow the TEACHERS
- Do lot of SMARTWORK

Content for Physical Chemistry

- Book: (NCERT CHEMISTRY 11th part - 1) — school
- Reference Material : Class Notes
- Things to Solve : 1. DPP ✓
  2. Class Examples ✓
  3. PW Modules (Periodic HW) — package
  4. P.Y.Q — IIT-JEE

TABLE OF CONTENT

01 MATTER

02 TYPE OF MATTER

03

04

Matter

→ Anythings that has mass and occupied space or volume

Ex → Book
→ pen
→ Car
→ Air

Ex ⇒ Maggi →
Water →

Example of nonmatter → No weight

→ No occupied space

Example → maa Ka pyar

→ light

→ sound → (a) matter →

→ love → (b) non matter ✓

→ Heat

→ Energy

→ sun light

Q→ Time is a example of

(a) matter

✓(b) Non-matter

Q

Which is not example of matter.

all iit

A ✓✓ Sound

iit Ban

B Air

iit

C Pen

iit

D Water

20Sec → Ans Batao

Q. Select the correct example of matter

20 Sec → Ans Batao

A Sound

B Heat

C Book

D None of these

Q

How many species is a example of matter Light, Heat, Sound, Air, Water, ~~Coire~~ wire, sun Light, Time, Love, Memories, Energy, Phone

A	1	C	3
B	4	D	5

20 Sec- Ans Batao

ARJUNA

Q

Match the following (IIT-JEE)

List-1		List_2
A	Phone → matter	P- Matter → A, B
B	Book → matter	Q- Non-matter → C, D
C	Memories → Non-matter	
D	Heat → Non-matter	

Matter

Mixture

→ more than one different type of atom or molecules present in matter

Ex → Air (N_2, O_2, etc)

→ Tea (water + sugar + tea - - -)

→ Colddrink

Pure substance

→ only one type of atom or molecules present in matter.

Ex → H_2O (pure)

Ex → Na(s)

Ex → O_2 gas → only O_2 molecule

He gas → only He-atom

Ex → Sugar solution (Sugar + H_2O)

→ alloy (Metal-1 + metal-2)

→ H_2 and O_2 gas in a container ($H_2 + O_2$)

Ex → H_2 gas

$K(s)$

$P_4(s)$

Q

Which of the following particles are the example of the pure ~~subscenes~~ substances

A CO_2

B Na(s)

C H_2 gas

D All

20sec- Ans Batao

ARJUNA

Q

Find out the ratio of example of mixture and pure substance in given example
Air, Cold drink, Tea, Na(s), He(g), P_4, sugar solution

A $\frac{4}{3}$

B $\frac{1}{2}$

C $\frac{3}{4}$

D $\frac{3}{2}$

Mixture → Air, Cold drink, Tea, sugar solution

pure substance → Na(s), He(g), P_4(s)

$= \frac{4}{3}$

ARJUNA

Q

Which of the following particles are the example of the mixture

A Air → (gas mixture N_2, O_2, etc)

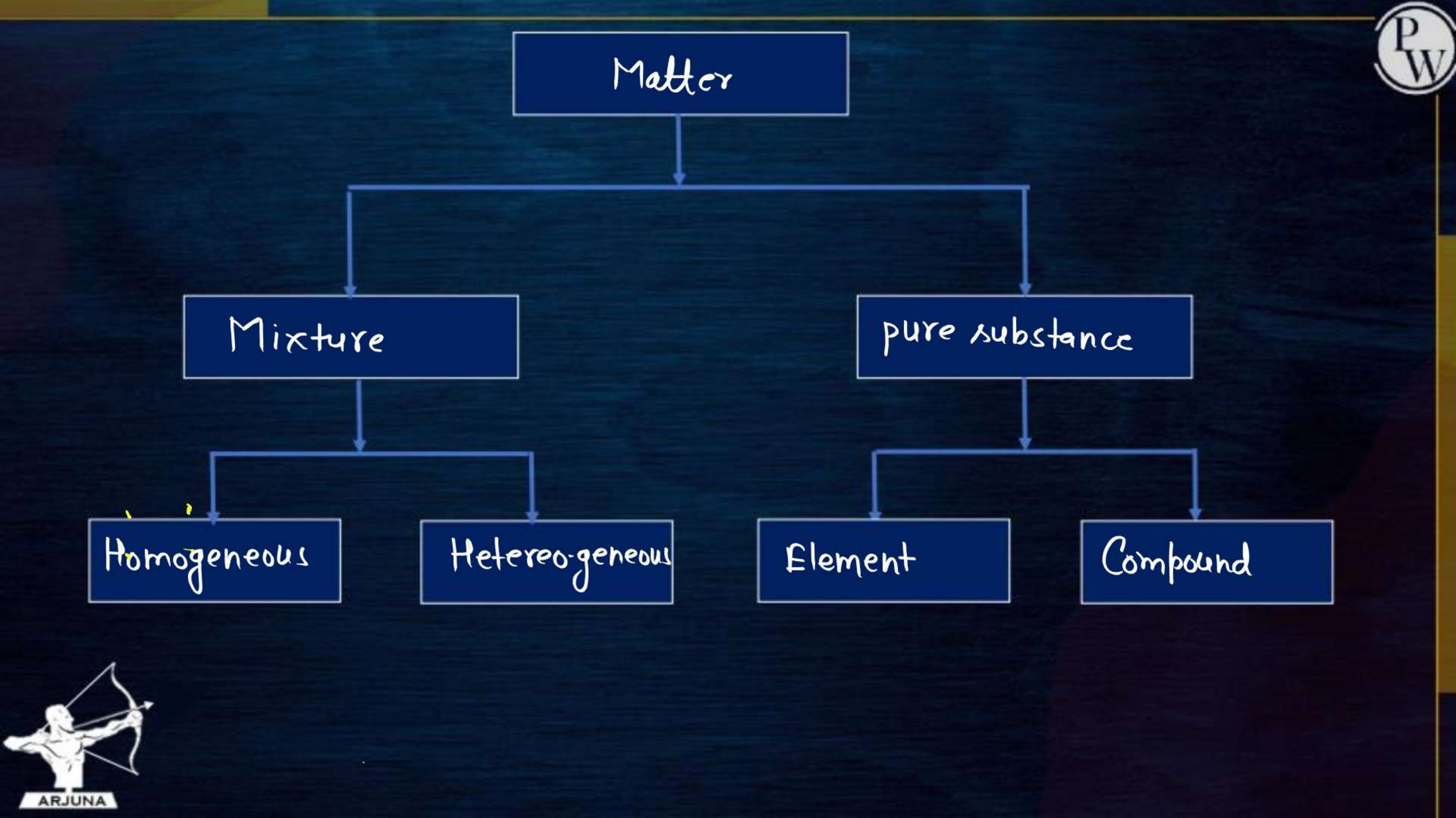
B Maggi

(H_2O + maggi + 1 Rs →)

C Common salt in water solution

↓ NaCl + H_2O

D ✓✓ All


Matter
Mixture
pure substance
Homogeneous
Hetereo-geneous
Element
Compound
ARJUNA

pure substance

Element

Compound

→ Element form by only one type of atom

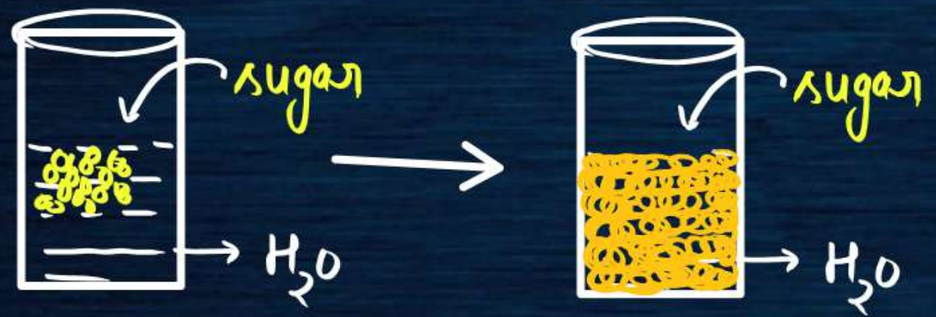
Ex → $He(g)$
$H_2(g)$
$O_3(g)$
$P_4(s)$

→ Compound form by different type of atoms (ek se jada different atom honge)

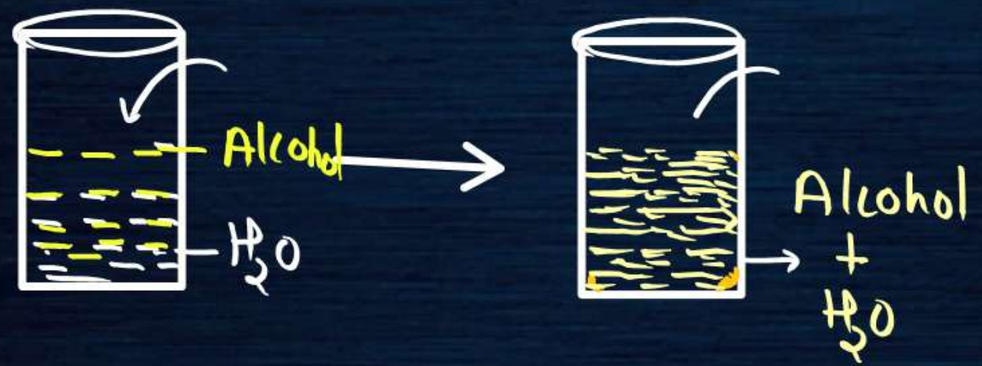
Ex → H_2O
Ex → CO_2
Ex → CH_3COOH, HCl
Ex → H_2SO_4

If two and more than 2 molecules or atom combine and form uniformally (distributed) solution or solid matter

Ex →

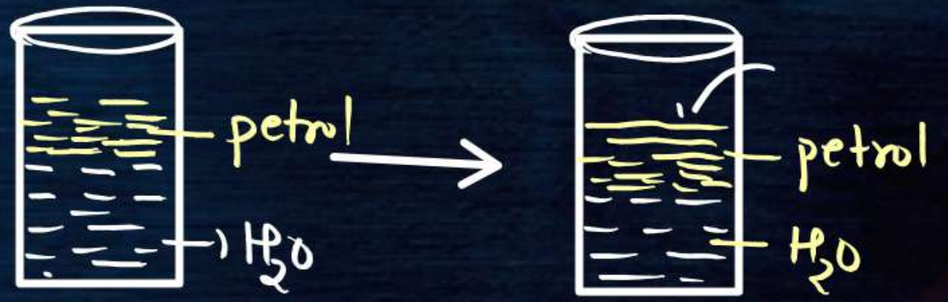


Ex →



If two and more than 2 molecules Combine and does not form uniformally distributed matter

Ex



Hetereo-geneous

Q

Which of the following particles are the example of the element?

element → 1 type ke atom se mil kr bante hai

A ✓✓ P_4 → P-atom

B H_2O

20 Sec

H + O → Comp.

C Air – mixture

D CO_2

↓

C + O ⇒ Comp.

Q

How many particles are the example of compound. H_2O, CO_2, Air, Sugar Solution, $Na(s)$, $H_2(g)$

(A) 2

(B) 3

(C) 1

(D) 4

Compound ⇒ 1 se jada different atom se bana ho.

Q

Select Homogeneous mixture in given example

ek jaisa dikhna

A ✓✓ Air (Homogeneous)

B ✓✓ Sugar solution (Homogeneous)

C Oil in water → (X)

D None of these

20 Sec ⇒ Ans Batao

Q

Match the following (6 Marks)

List – I	List – II
(a) Element →	(p) Air → N_2, O_2 etc
(b) Compound	(q) Sugar Solution → sugar + H_2O
(c) Mixture	(r) H_2O
	(s) O_2 gas

5 Rs → RJ Sir se le lena

[A] ✓ (a – s), (b – r), (c – p, q)

[B] ✗ (a – s, r), (b – r, q), (c – p)

[C] (a – r), (b – s), (c – p, q)

[D] (a – s), (b – r, q), (c – p) ✗

(A) Elements → S

(B) Compound → r

(C) Mixture → P, q

ARJUNA

Q

Select the correct example of elements.

↳ one type atom

A O_2

B CO_2

C Air –

D H_2O –

10 Sec Ans Batao

Thank - You